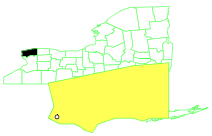
HOOKER CHEMICAL S-AREA

NEW YORK

EPA ID# NYD980651087



EPA REGION 2
CONGRESSIONAL DIST. 29
Niagara County
Along the Niagara River

Site Description

The Hooker Chemical S-Area site is an 8-acre industrial landfill owned by the Occidental Chemical Corporation. It is located at the southeast corner of OCC's Buffalo Avenue chemical plant in Niagara Falls, New York, along the Niagara River. Adjacent to the landfill is the City of Niagara Falls (City) drinking water treatment plant (DWTP). The Province of Ontario, Canada, is located across the Niagara River, a distance of approximately two miles. The landfill lies atop approximately 30 feet of soil, clay, till, and manmade fill on an area reclaimed from the Niagara River. Beneath these materials is fractured bedrock. OCC disposed of approximately 63,000 tons of chemical processing wastes into the landfill from 1947 to 1961. The landfill also was used by OCC for disposal of other wastes and debris, a practice that ended in 1975. Two lagoons for nonhazardous waste from plant operations were located on top of the landfill and were operated under New York State permits until 1989, when OCC discontinued operating these lagoons. During an inspection of the DWTP in 1969, chemicals were found in the bedrock water intake structures. In 1978, sampling of the structures and bedrock water intake tunnel revealed chemical contamination. The site is located in a heavily industrialized area of Niagara Falls. There is a residential community of approximately 700 people within 1/4 mile northeast of the site. The DWTP serves an estimated 70,000 people.

Site Responsibility: This site is being addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY
Proposed Date: 12/01/82
Final Date: 09/01/83

Threats and Contaminants

On- and off-site ground water and soil are contaminated with toxic chemicals occurring as both aqueous (water soluble) phase liquids (APLs) and non-aqueous (immiscible) phase liquids (NAPLs). These chemicals include primarily chlorinated benzenes. Dioxin is also present in ground water at trace levels. The main health threat to people is the risk from eating fish from the lower Niagara River/Lake Ontario Basin. Consumption of drinking water from the City's DWTP is not presenting health risks at present. However, the site, because of its proximity to the DWTP, presents a potential public health threat to the consumers of drinking water from the plant.

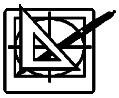
Cleanup Approach

The site is being addressed in three phases: immediate actions and two long-term remedial phases focusing on cleanup of the entire site and construction of a municipal drinking water treatment plant.

Response Action Status

Immediate Actions: The City closed the contaminated main intake tunnel at the DWTP and put an emergency tunnel into service to alleviate the threat of contaminating drinking water.

Entire Site: EPA selected a containment remedy to prevent further chemical migration from the landfill toward the DWTP and into and under the Niagara River. The remedy includes: (1) a slurry cut-off wall (barrier wall) to encompass the landfill and off-site areas contaminated with chemicals in overburden soils, (2) an overburden collection system located within the barrier wall and comprised of horizontal drains and groundwater extraction wells to contain and collect both APL and NAPL chemicals, (3) a bedrock remedial system consisting of groundwater extraction wells and NAPL recovery wells; (4) an on-site leachate storage facility for separating and storing APL and NAPL chemicals prior to treatment; (5) a carbon adsorption facility for treating APL chemicals; (6) incineration of NAPL chemicals; (7) a final cap; and (8) monitoring programs to determine the effectiveness of the remedy. All components of the remedy selected for the landfill, with the exception of the final cap and monitoring programs, have been completed. The construction of the final cap commenced in August of 2000 and is ongoing. Operational startup of the remedial systems began in 1996. A evaluation of the remedial system's performance indicated that additional groundwater extraction wells are needed to complete the construction of the remedy. These wells have been designed and will be installed this Spring.



City of Niagara Falls Drinking Water Treatment Plant: The remedy selected to address contamination at the DWTP includes the construction of a new plant at a new location, demolition of the old plant and cleanup of the property. The new plant was built and on-line by the end of March 1997. Demolition of the old plant was completed in late 1997. The remedy selected for the old plant property includes (1) a slurry cut-off wall (an extension of the S-Area barrier wall) to contain NAPL and APL chemicals, (2) a drain collection system to prevent APL chemicals in overburden soils from migrating to the Niagara River, (3) removal of any NAPL

chemicals present in the abandoned bedrock raw water intake tunnel and the securement of the intake tunnel and shafts by grouting, and (4) capping. The slurry cut-off wall, drain collection system and cap were constructed in 1998. Over 1,000 gallons of NAPL were removed from the floor of the bedrock intake tunnel by divers in 1999. The bedrock tunnel, two intake shafts and a shore shaft were grouted in 2000 but a portion of the tunnel was not. The procedure to complete the grouting of the tunnel is presently being discussed.

Site Facts: In 1979, the U.S. Department of Justice, acting on behalf of the EPA, filed a complaint against the parties potentially responsible for the site contamination. The State of New York joined in the suit and a Settlement Agreement was signed by the parties in January 1984. It was approved and entered by the District Court of Western New York in April 1985. The Agreement called for a potentially responsible party to conduct an investigation at the site, to recommend cleanup standards for the site, and to conduct site cleanup activities. A second agreement was signed by the parties in September 1990 and approved by the Court in April 1991. This Agreement, which amended the original 1985 Settlement Agreement, included an expanded cleanup program to address off-site areas and the construction of a new DWTP.

Cleanup Progress

The construction of a new $70 million DWTP at a new location addresses the threat to the drinking water supply from S-Area. The new plant replaces the old facility, which supplied drinking water to city residents for the past 83 years. The S-Area barrier wall and remedial systems provide physical and hydraulic containment of the 63,000 tons of chemical waste buried in the landfill. Their operations have also reduced the loadings of toxic chemicals to the Niagara River. Approximately 320,000 gallons of contaminated ground water are treated per day, with the treated effluent discharged to the Niagara River via a permitted outfall. Since the startup of the S-Area remedial systems in 1996, over 400 million gallons of contaminated ground water have been treated and 182,000 gallons of NAPL have been collected for incineration. Over 120,000 gallons of the collected NAPL have been transported to a commercial incinerator in Texas for treatment.

Site Repository

USEPA Public Information Office, Carborundum Center, Suite 530, 345 Third Street, Niagara Falls, New York, 14303